FLINT HILLS resources

MANAGEMENT OF CHANGE FORM

(REFER TO PROCEDURE EHS-I-006 FOR EXPLANATION OF THIS FORM)

PROCESS UNIT/AREA: Utilities Fire system MOC#: 155225

ORIGINATOR: Rich Ploch/Martin K. DATE: 01/31/2014

SECTION A - TECHNICAL BASIS FOR PROPOSED CHANGE

Purpose and Technical Basis:	Install a new PIV shutoff unit on south plant side fire system
Description: *Attach additional paper if necessary*	Install a new PIV on the underground fireline system between current PIV numbers 26 & 24. ~~Loaction~~ Location will be near the south property fence line near the railgate. This will allow for better water flow control & future isolation ability given the current poor condition of the other two PIV's listed above.
Impact of change On Environmental Health / Safety:	N/A

SECTION B - DOCUMENTATION - *Attach appropriate documentation illustrating proposed changes*

☐	Procedures	☐	Inspections, Testing, PM's	☐	Engineering DWGS	☐	PHA'S
☐	PSM Documentation	☐	CHEMGEMS Specifications	☒	P&ID's	☐	MI Applicability Checklist
☐	MSDS Information	☐	Energy Control Plans	☐	PFD's		
☐	Training/Communication	☐	Floor Plans	☐	LDAR		
☐	Quality Issues	☐	Mechanical Integrity DWGS	☒	Site/Plot Plan		
☐	Customer Impact	☐	Electrical Schematics	☐	Electrical Single Lines		
☐	Alarm Response Tables	☐	Loop DWGS	☐	Elect'l Classification		
☐	Other	☐	JSA's	☐	OJT's		

Affected Personnel Needing To Be Informed/Trained On Proposed Change

☒	Operations	☐	I/E Technicians	☐	Community
☒	Production Facilitators	☐	Engineering	☐	Regulatory Entities
☒	Mechanics/Welders	☐	Contractor(s) _____	☐	Corporate _____
☐	Electricians	☐	Office Personnel	☐	Other

SECTION C - Is Change Permanent?

☒	**YES**	**Proposed Project Start Date** **02/03/2014**
☐	**NO**	**Proposed Project Completion Date** **02/28/2014**

SECTION D - Is Change Temporary ?

☐	**YES**	**From:**
☒	**NO**	**To:**

SECTION E - Is Change Emergency ?

☐	**Yes**	
☒	**NO**	**Start:**

Approval Received From:

- ☐ Area Mgr./Designee
- ☐ Env. Mgr. /Designee
- ☐ Plant Mgr./Designee (if requested)
- ☐ Engineering/Maint. Mgr./Designee
- ☐ H&S Mgr/Designee

Approval Received By:

_____

Signature *Date*

Returned To Original Service: _____/_____/_____

Area Manager/Designee

Signature: _____

Extended To: _____/_____/_____*

Plant Managers Approval:

Plant Mgr./

Signature *Date*

*Note: Temporary MOCAs may be extended up to 6 months at a time

SECTION F - DESIGN SAFETY REVIEW

PHA. Does the proposed change require a PHA? (i.e. What-if/Checklist, Hazop, Revalidation, Review) If yes indicate type of PHA in Action to be Taken section. ☐YES ☒NO

PSSR. Does the proposed change require a Pre-Start-up Safety Review (PSSR)? See EHS-I-067 for Requirements. Mandatory if change involves DCS Interface. ☒YES ☐NO

1. RELIEF AND BLOWDOWN

Does the Proposed Change:	YES	NO
1. Introduce or alter any potential cause of over/under pressurizing of the system?	☐	☑
2. In any way affect existing equipment installed to prevent over/under pressurization?	☐	☑
3. Introduce or alter any potential cause of raising/lowering the system temperature?	☐	☑
4. Introduce a risk of creating/reducing vacuum in the system?	☐	☑
5. Have any critical relief devices been identified for verification of proper rating and installation?	☐	☑

2. AREA CLASSIFICATION

Does the Proposed Change:	YES	NO
1. Introduce or alter the storage of flammable materials?	☐	☑
2. Introduce or alter the location of potential leaks of flammable materials?	☐	☑
3. Introduce new or alter existing electrical equipment?	☐	☑
4. Affect area ventilation?	☐	☑
5. Has the established building electrical classification been changed?	☐	☑

3. SAFETY CONSIDERATIONS

Does the Proposed Change:	YES	NO
1. Require any additional safety equipment or layers of protection?	☐	☑
2. Alter or affect existing safety equipment or means of egress?	☐	☑
3. Require changes to the function or independence of existing equipment or layers of protection?	☐	☑
4. Alter or affect critical safety instrumented functions (SIF's)?	☐	☑
5. Alter the noise level in the surrounding area?	☐	☑
6. Increase the potential for exposure to any chemicals?	☐	☑
7. Introduce a new or previously unused chemical/raw material?	☐	☑
8. Affect de-energization? (able to lock-out, drain materials)	☐	☑
9. Create any ergonomic concerns?	☐	☑
10. Affect the Battery Limit Valves (BLV)?	☐	☑
11. Affect the overall security of the facility?	☐	☑
12. Does this increase the risk of potential impact to plant personnel (employees and contractors)?	☐	☑
13. Does the proposed change affect facility siting relative to both people and equipment in any of the following situations: temporary changes , before startup after a permanent change, or before startup after temporary change has been removed/closed/returned to original condition?	☐	☑
14. If the proposed change affects replacement or demolition of piping or conduit, will the entire run be identified and clearly marked prior to work, to ensure safe work activity?	☑	☐
15. Affect the safe transport of hazardous material? For ex., introducing a new hazardous material for transport or changing the method of transportation of the hazardous material.	☐	☑

4. ENVIRONMENTAL AND QUALITY CONSIDERATIONS

Does the Proposed Change:	YES	NO
1. Alter the composition or amount of a process water?	☐	☑
2. Increase the emissions of any regulated pollutant?	☐	☑
3. Require a new or modified operating/construction permit?	☐	☑
4. Affect the control of the process?	☐	☑
5. Affect the composition or physical properties of the final product?	☐	☑
6. Impact any Pentane/Styrene components in the Leak Detection and Repair (LDAR) Program?	☐	☑
7. Increase risk of off-site residential & environmental receptors?	☐	☑
8. Introduce new materials/chemicals to the site?	☐	☑
9. Does an evaluation of chemical compatibility need to be conducted?	☐	☑
10. Involve decommissioning/demolition of equipment or structures?	☐	☑
11. If answered YES to question 10, do NESHAP or decontamination requirements apply? **	☐	☑
12. Will this change require portable engines to be brought on to FHR property?	☐	☑

** Consult with Environmental Engineer for completion of this question.

SECTION F - DESIGN SAFETY REVIEW -- cont.

5. OPERATION AND DESIGN

Does the Proposed Change:	YES	NO
1. Affect the process or equipment upstream/downstream of the change?	☐	☑
2. Affect access to process or equipment/controls for personnel?	☐	☑
3. Introduce any new or affect existing interlocks or alarms systems?	☐	☑
4. Affect manpower or qualified personnel?	☐	☑
5. Affect the loads/strengths of existing foundations, structures, vessels, or pipe racks?	☐	☑
6. Impact requirements of existing or proposed piping supports? *(Needs to be adequately designed for expected stresses due to pressure and thermal loadings.)*	☐	☑
7. Alter the DCS/Software logic of process operations?	☐	☑
8. Affect process chemistry? (reactivity/compatibility)	☐	☑
9. Affect maximum intended inventory, that would require updating maximum inventory tables?	☐	☑
10. Affect safe upper/lower limits for such items as temperature, process flows or compositions?	☐	☑
11. Affect material/energy balances?	☐	☑
12. Affect plant utility resources? (i.e. steam, water, electricity, etc.)	☐	☑
13. Affect equipment with heat-up/cool-down cycling requiring bolt retightening after start-up?	☐	☑
14. Is an exception/revision to design codes or standards (CHEM-GEMS, etc.) required?	☐	☑

SECTION G - AFFECTS ON PROCEDURES, TRAINING, AND DOCUMENTATION

Will the Proposed Change:	YES	NO
1. Introduce new or impact existing operational procedures? *	☐	☑
2. Introduce new or impact existing maintenance procedures? *	☐	☑
3. Add or Remove equipment/instrumentation? *(Contact ETA to assign Equipment/Instrumentation Location Numbers. If equipment/instrumentation is being added, MI Applicability Checklist MNT-F-161 shall be completed by MOC originator, and approval form(s) sent to the MI coordinator.)*	☒ LG 2-3-14	☑
4. Revise equipment preventative maintenance/ inspections, job plans , and/or frequencies?	☑	☐
5. Require additional training for operational or maintenance personnel? *(requires completion of Leaning and Development Job Aid addendum A))*	☐	☑
6. Require additional notification for operational or maintenance personnel?	☑	☐
7. Require updating controlled drawings? * *(PFD'S, LDAR, P&ID's, Floor Plans, Electrical Single Lines, Loop Drawings/Electrical Schematics, MCC arrangement, MI Iso Drawings)*	☑	☐
8. Require updating equipment files? *(Engineering, Maintenance, Manufacturers Inspect/Test results)*	☐	☑
9. Require a spare parts list and inventory to be developed?	☐	☑
10. Require major project spare equipment to be turned over to maintenance?	☐	☑
11. Require equipment labeling in the field?	☑	☐
12. Require updating of Alarm Response Tables? *	☐	☑
13. Require a new/modification of existing energy control plans? *	☑	☐
14. Cause any PSM/RMP applicability issues?	☐	☑
15. Cause a change in PSM/RMP program level?	☐	☑
16. Will this change have any effect on the overall plant facility siting issues?	☐	☑
17. Increase or decrease the impact contour for worst-case scenario by a factor of two or more?	☐	☑
18. Will this MOC supersede /interfere with any other Temporary/Emergency/Permanent MOC's?	☐	☑
19. Is there a need to update the EPS-I-004, Chemical Compatibility Matrix?	☐	☑
20. Is a Layer of Protection Analysis (LOPA) study required?	☐	☑
21. Will this affect the Interlock Matrix?	☐	☑
22. Require updating of electrical energy consumption spreadsheet? Update required for any MCC, CB panel or bus bar connection additions or alterations.	☐	☑
23. Will this change impact Proprietary Technology including product, process, equipment, technical data, or other trade secret information licensed to FHR by third parties" If yes, contact the Proprietary Technology Coordinator.	☐	☑

*** NOTE: Refer to Engineering Equipment Location Database for a list of affected documents, sorted by Location Number.**

Any questions with a 'YES' answer, requires follow-up activity. List the action(s) to be taken to resolve any issues identified in 'Section F' and 'Section G'			
Item No.	**Action To Be Taken**	**Responsible Party**	**Target Completion Date**
F-3.14	underground utilities in area to be marked	Justin C.	2-28-14 completed 1-14-14
G-6a	notify Utilities Ops / Facilitators itm 2-6-14	Rich P.	3-31-14
G-6b	notify Maint. Techs	Mark S.	3-31-14
G-7	update Fire Drawing	Lisa G.	4-30-14
G-X4	Verify Fire Code inspection List is updated	~~Lisa G.~~ Dean T. LG 2-3-14	4-30-14
G-11	Label new PIV after Engineering gives #	Rich P.	3-31-14
G-13	Create/Verify ECP	Rich P	3-31-14
G-3	Assign location # to PIV	Brian C.	2-28-14 LG 2-3-14
F-PSSR	Perform PSSR	Rich P	3-31-14 BC 2-10-14

MOC APPROVAL FORM

Originator: Rich Ploch MOC No. 155225

MOC Packet Completeness Verification Review

Title/Position	Verification Review Signatures	Date
Drafting Tech, or Designee	[signature]	2-3-14
MI Coordinator, or Designee	[signature]	1-31-14
Maintenance Tech from appropriate area	[signature]	1-31-14
Operator from affected area	Vic Carter	1-31-14
Area Training Contact, or Designee	[signature]	1-31-14

Signatures required Prior To Implementation of MOC.

Title/Position	Authorizing Signatures	Date
Area Manager, or Designee (Operations Representative Assignee: _____)	[signature]	1-31-14
Engineering /Maintenance Manager or Designee (Electrical Engineering Review: _____)	[signature]	2/4/14
Health and Safety Manager or Designee (PSM Coordinator Review _____)	[signature]	2-6-14
Operations Manager or Designee	[signature]	1-31-14
Environment Manager or Designee	[signature]	2/6/2014 MD

Plant Managers Review
(as requested by any of the Authorizing signers)

Title/Position	Review Signature	Date
Plant Manager or Designee		

VERIFICATION OF MOC CLOSURE

By signing below:

1. The Originator of this MOC confirms that all action items have been completed & that equipment/documentation in this change is set to start up.
2. The Engineering/Maintenance Manager has completed and attached the MOC – Closure Checklist.

MOC closure requires the Originators Signature, and that of the Engineering/Maintenance Manager

MOC Originator: Date:_____

Engineering/ Maintenance Manager: Date:_____

MANAGEMENT OF CHANGE - CLOSURE CHECKLIST

This Form MUST BE completed by the Engineering/Maintenance Manager, and attached to MOC Prior to MOC Being Closed By ETA

Originator: Rich Ploch MOC No. 155225

1. What Type of Management of Change?

☐ Permanent MOC

☐ Emergency MOC

Returned to Original Service?

☐ YES ☐ NO

☐ Temporary MOC

Returned to Original Service?

☐ YES ☐ NO

2. PHA. completed. (HAZOP, Safety Review, Independent Review)

☐ YES

☐ NO

☐ N/A

3. Documentation included in file or referenced, which verifies affected change has been communicated to all effected parties?

☐ YES

☐ NO

☐ N/A

4. Documentation illustrating changes included in MOC package? *(marked-up drawings, etc.)*

☐ YES

☐ NO

☐ N/A

5. Referenced Drawings Updated?

☐ YES

☐ NO

☐ N/A

6. All applicable documentation has been updated to reflect changes?

☐ YES

☐ NO

☐ N/A

7. All training has been completed.

☐ YES

☐ NO

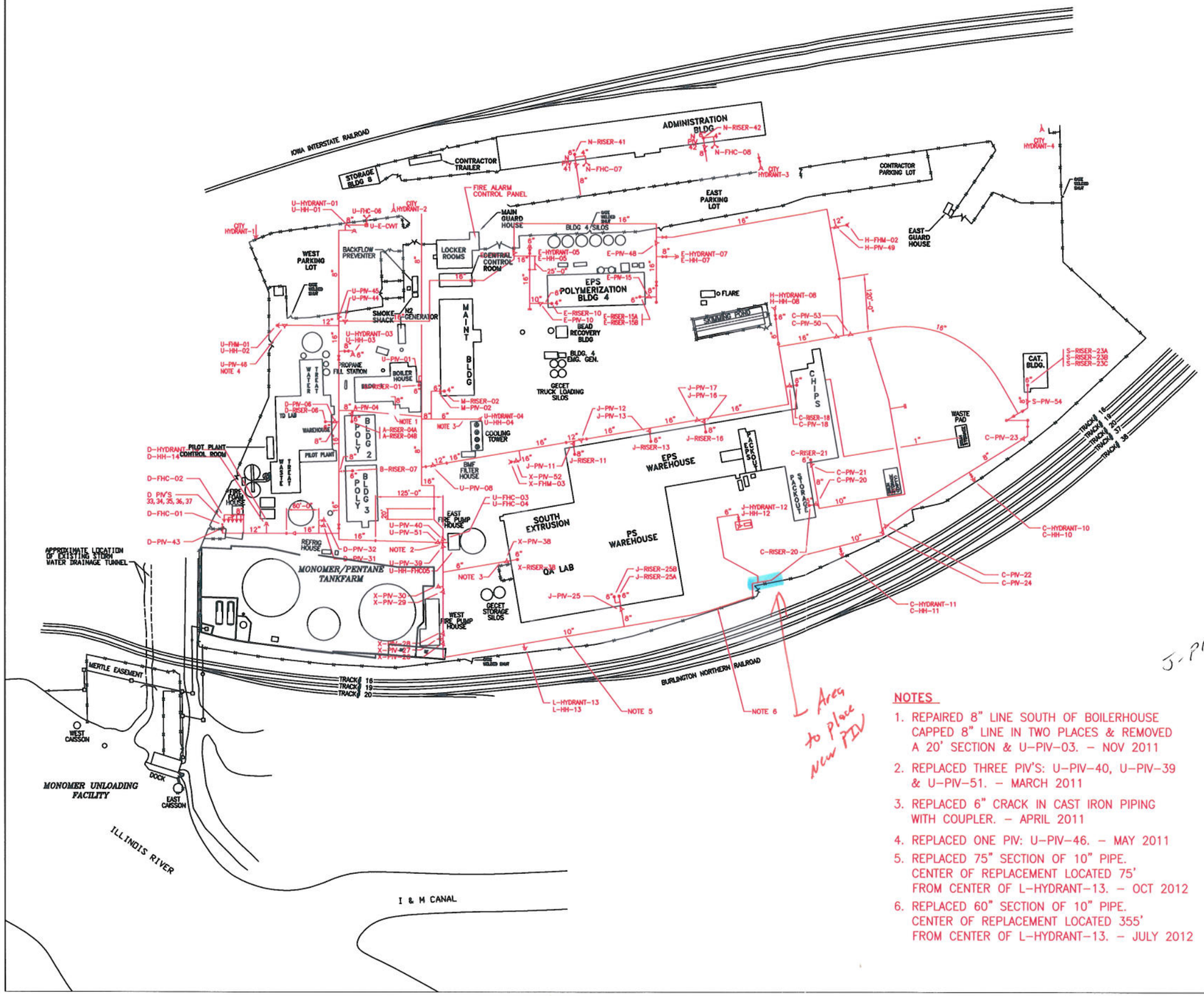
☐ N/A

'Management of Change' Audited By:

Title: _____

Signature: _____ Date: _____

01Z003 SHT 1



NOTES

1. REPAIRED 8" LINE SOUTH OF BOILERHOUSE CAPPED 8" LINE IN TWO PLACES & REMOVED A 20' SECTION & U-PIV-03. – NOV 2011
2. REPLACED THREE PIV'S: U-PIV-40, U-PIV-39 & U-PIV-51. – MARCH 2011
3. REPLACED 6" CRACK IN CAST IRON PIPING WITH COUPLER. – APRIL 2011
4. REPLACED ONE PIV: U-PIV-46. – MAY 2011
5. REPLACED 75" SECTION OF 10" PIPE. CENTER OF REPLACEMENT LOCATED 75' FROM CENTER OF L-HYDRANT-13. – OCT 2012
6. REPLACED 60" SECTION OF 10" PIPE. CENTER OF REPLACEMENT LOCATED 355' FROM CENTER OF L-HYDRANT-13. – JULY 2012

N

LEGEND

- POST
- SIGN POST
- MANHOLE
- MANHOLE (CAPPED)
- SHUT-OFF VALVE
- FIRE HYDRANT
- FIRE HYDRANT MANIFOLD
- FIRE HOUSE
- FIRE MAIN INDICATOR
- FIRE ALARM PULL STATION (NON EXP)
- LIGHT POLE
- POWER POLE
- JUNCTION BOX
- STOP GATE
- CATCH BASIN
- TRANSFORMER
- FENCE LINE
- ELECTRIC
- UNDERGROUND ELECTRIC
- UNDERGROUND GAS
- UNDERGROUND TELEPHONE
- UNDERGROUND WATER
- SANITARY SEWER
- STORM SEWER
- COAST GUARD JURISDICTIONAL BOUNDARY

LAYER CHART

LAYER	ON
0	✓
ASBESTOS ROOFING MAT'L	
ASBESTOS SAMPLE POINTS	
ASBESTOS LOCATION TYPES	
BUILDING	✓
CG JURISDIC. BOUNDRY	
CONCRETE	
CONTOUR	
DIKE	✓
DIMENSION	✓
DOCK	✓
ELECTRICAL AREA CLASS.	
ELECTRICAL	
ELEVATIONS	
EMERGENCY ASS'Y AREAS	
EMISSION STACKS	
EQUIPMENT	
EVACUATION AREAS	
EVACUATION ROUTES	
FACILITY FUEL OIL SPCC	
FENCE	✓
FIBER OPTICS	
FIBER OPTIC WIRES	
FIRE ALARM	
FIRE ALARM RISER	
FIRE ALARM COMM (1)	
FIRE ALARM COMM 1 TEXT	
FIRE ALARM COMM (2)	
FIRE ALARM COMM 2 TEXT	
FIRE ALARM DEVICE ID'S	
FIRE ALARM DEVICE LOCATIONS	
FIRE/SPRINKLER LOOP	✓
FRC REQ'D	
GRID	
HEARING PROTECTION	
LAN	
LAN AREA	
MECHANICAL INTEGRITY	
MISC-BLDG	✓
MISC-UNDERGROUND	
NOISE TEST LOCATIONS	
PIPERACK	
PIPERACK TEXT	
PLANT PAGING SYS	
POST	
PRE-PLAN	
RAILROAD	✓
REV	
ROAD	✓
SANITARY SEWER	
SECURE_RESTRICTED AREA	
SECURITY CAMERA (U.G.)	
SPOT	
SPUR	
STORM SEWER	
STORM WATER DRAINAGE	
TANK	
TANK TEXT	✓
UTILITY	

Flint Hills Resources

PERU, ILLINOIS PLANT

REV	DATE	DESCRIPTION
L	01/13	PER MOC 152726
R	01/13	PER MOC 153754
P	01/13	PE RMOC 153629
N	01/13	PER MOC 153161
M	01/13	PER MOC 152699

NAME: SITE PLOTPLAN FLINT HILLS RESOURCES

DRAWN BY: TJB — CONTROLLED: YES

DATE: 8/28/96

SCALE: GRID=100' — PLOT SCALE: 1=1100

VERSION: E — SHT# 1 — REV# R

01Z003

FHRPRU002083

This analytical report is from the soil generated from the Fire Line dig that occurred on 2/19/2014.

Wednesday, April 16, 2014

Michael Schmidt
Flint Hills Resources
501 Brunner Street
Peru, IL 61354
TEL: (815) 224-5451
FAX: NA

RE: TCLP Metals PAS WO: 14D0284

Prairie Analytical Systems, Inc. received 1 sample(s) on 4/14/2014 for the analyses presented in the following report.

All applicable quality control procedures met method specific acceptance criteria unless otherwise noted.

If you have any questions, please feel free to contact me at (217) 753-1148.

Respectfully submitted,

Ana L. Jensen
Project Manager

Certifications: NELAP/NELAC - IL #100323

LABORATORY RESULTS

Client: Flint Hills Resources
Project: TCLP Metals **Lab Order:** 14D0284

Case Narrative

Sample was taken from a waste pile created from a fire line break on 2/19/2014. The excavated soil was located in the furthest corner from the entrance in the containment area. The waste pile was irregularly shaped and measured approximately 21'x23'x4'. Five samples were taken at random covering all 4 quadrants of the pile and were composited for a final sample.

LABORATORY RESULTS

Client: Flint Hills Resources
Project: TCLP Metals **Lab Order:** 14D0284
Client Sample ID: Fire 2/19 **Lab ID:** 14D0284-01
Collection Date: 4/14/14 11:18 **Matrix:** Solid

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TCLP Metals by ICP-MS									
*Mercury	U	0.000600		mg/L	3	4/15/14 10:35	4/16/14 3:13	SW 6020A	JTC
*Selenium	U	0.0150		mg/L	3	4/15/14 10:35	4/16/14 3:13	SW 6020A	JTC
*Silver	U	0.0150		mg/L	3	4/15/14 10:35	4/16/14 3:13	SW 6020A	JTC
TCLP Metals by ICP									
*Arsenic	U	0.0100		mg/L	1	4/15/14 10:35	4/15/14 17:49	SW 6010B	CEP
***Barium**	**1.20**	0.0500		mg/L	10	4/15/14 10:35	4/16/14 10:56	SW 6010B	CEP
***Cadmium**	**0.229**	0.00500		mg/L	1	4/15/14 10:35	4/15/14 17:49	SW 6010B	CEP
*Chromium	U	0.00500		mg/L	1	4/15/14 10:35	4/15/14 17:49	SW 6010B	CEP
***Lead**	**0.346**	0.00500		mg/L	1	4/15/14 10:35	4/15/14 17:49	SW 6010B	CEP
Conventional Chemistry Parameters									
Percent Solids	**88.3**	0.100		%	1	4/15/14 12:46	4/16/14 10:01	ASTM D2974	CCD

LABORATORY RESULTS

Client: Flint Hills Resources
Project: TCLP Metals **Lab Order:** 14D0284

Notes and Definitions

*	NELAC certified compound.
U	Analyte not detected (i.e. less than RL or MDL).

Chain of Custody Record

Central IL - 1210 Capital Airport Drive - Springfield, IL 62707-8490 - Phone (217) 753-1148 - Facsimile (217) 753-1152
Chicago IL Office - 9114 Virginia Rd., Ste 112 - Lake in the Hills, IL 60156 - Phone (847) 651-2604 - Facsimile (847) 458-9680
Central/Southern IL Office - Phone (217) 414-7762 - Facsimile (217) 223-7922

Prairie Analytical Systems, INCORPORATED
www.prairieanalytical.com

Client	Flint Hills
Address	
City, State, Zip Code	
Phone / Facsimile	
Project Name / Number	
Project Location	
P.O. # or Invoice To	
Contact Person	Mike Schmidt

Reporting: TACO ☐ Resid ☐ Ind/Comm; CALM ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F; RISC ☐ Resid ☐ Indust

Sample Description	Sampling Date	Sampling Time	Matrix Code	Preserv Code	No. of Containers	Sample Type Comp	Sample Type Grab	Analysis and/or Method Requested: TCLP Metals	Sampler Comments
Fire 2119	4/14/14	11:18	S	O	1	X		X	

Matrix Code	A - Aqueous	DW - Drinking Water	GW - Ground Water	NA - Non-Aqueous Liquid	S - Solid	O - Oil	X - Other (Specify)
Preserv Code	0 - None	1 - HCl	2 - H2SO4	3 - HNO3	4 - NaOH	5 - 5035 Kit	X - Other (Specify)

Relinquished By	Date	Time	Received By	Date	Time	Method of Shipment
Aaron Smith	4/14/14	14:00	PAS	4/14/14	14:00	hand

Special Instructions:

Turnaround Time: Standard ☐ Rush ☒
Date Required: 4/16/14

QC Level: 1 ☒ 2 ☐ 3 ☐ 4 ☐

On wet ice? (Yes) No

Temperature (°C): 3.8

Page 5 of 5

FHRPRU002088